OCR
Oxford Cambridge and RSA

Sample Assessment Material Version 2.0

Level 3 Certificate in Core Maths B (MEI)

H869/02 Statistical Problem Solving
Sample Question Paper

Time allowed: 2 hours

You must have:
- the Insert (inside this document)

You may use:
- a scientific or graphical calculator

Please write clearly in black ink. **Do not write in the barcodes.**

Centre number | | | | | | Candidate number | | | | |

First name (s) _____

Last name _____

INSTRUCTIONS
- Use black ink. You can use an HB pencil, but only for graphs and diagrams.
- Write your answer to each question in the space provided. If you need extra space use the lined pages at the end of this booklet. The question numbers must be clearly shown.
- Answer **all** the questions.
- Where appropriate, your answer should be supported with working.
- Give your final answers to a degree of accuracy that is appropriate to the context.

INFORMATION
- The total mark for this paper is **60**.
- The marks for each question are shown in brackets **[ ]**.
- This document has **20** pages.

ADVICE
- Read each question carefully before you start your answer.

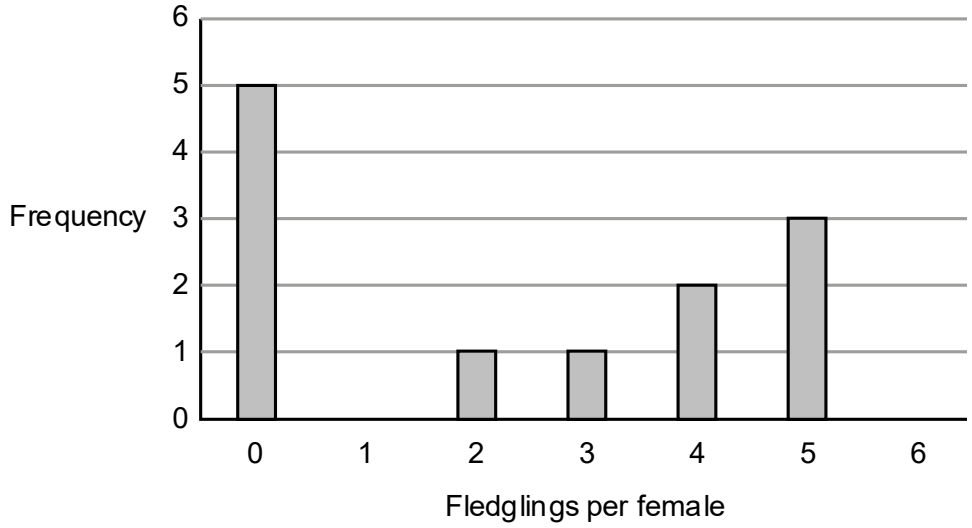
Section A (30 marks)

1 A biologist investigates the possible decline in numbers of a type of bird in a wood.

The bird eats insects. The biologist thinks that the use of insecticides near the wood may be one of the causes of the possible decline.

The biologist observes female birds during a breeding season and counts the number of fledglings (young that leave their nests).

The chart shows the biologist's results.



(a) Show that 12 female birds were observed.

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..... **[1]**

(b) How many fledglings were there altogether?

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..... **[1]**

(c) The biologist applies these modelling assumptions to this situation.

- Half of the fledglings are male and half are female.
- 75% of the fledglings will be taken by predators before they are old enough to breed.
- A female breeds three times in her lifetime and only once per breeding season.
- A female breeds once a year.

(i) Show that the results from parts **(a)** and **(b)** and the modelling assumptions lead to the conclusion that the birds will reduce in numbers.

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..... **[3]**

(ii) Give **two** comments about whether there is good evidence for the biologist to ask farmers to stop using insecticides near the wood.

Comment 1 .....

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Comment 2 .....

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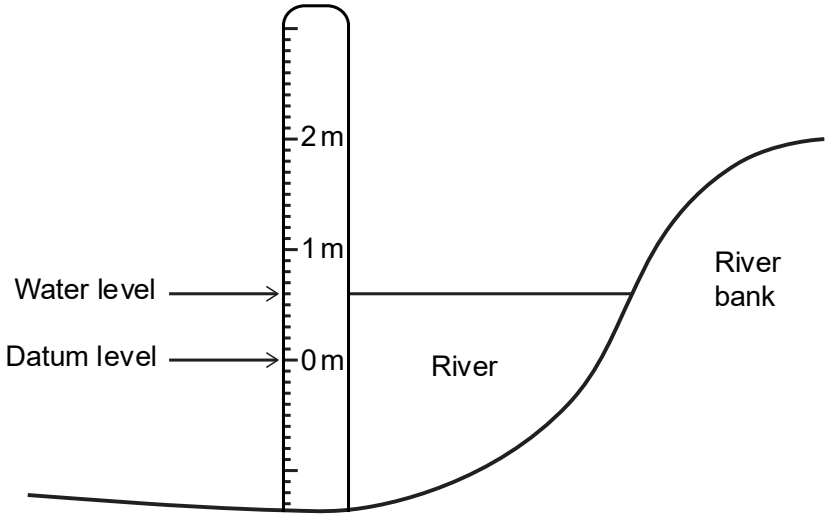
..... **[2]**

2 A river flows through a town. If the height of the water level is more than 2 metres above a given datum level, the town will flood.



The cost of house insurance in this town increases.

The insurance companies say that this is because the risk of flooding is high.

The residents of the town decide to investigate the situation.

They want to be able to either:

- prove that the insurance companies are **not** correct or
- claim funding for flood defences.

The town's data records give the greatest height of the water above the datum level each year for the last 120 years.

The mean of these heights is 0.61 m.

The standard deviation is 0.48 m.

One of the residents uses the Normal distribution to model this situation.

(a) Use the Normal model to find the probability of the town flooding.

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..... **[3]**

(b) Use your answer to part **(a)** to determine if the statement below is **true** or **false**.

'The flood risk can be described as a once in 500 years event.'

Tick (✓) **one** box.

True ☐

False ☐

Show your reasoning.

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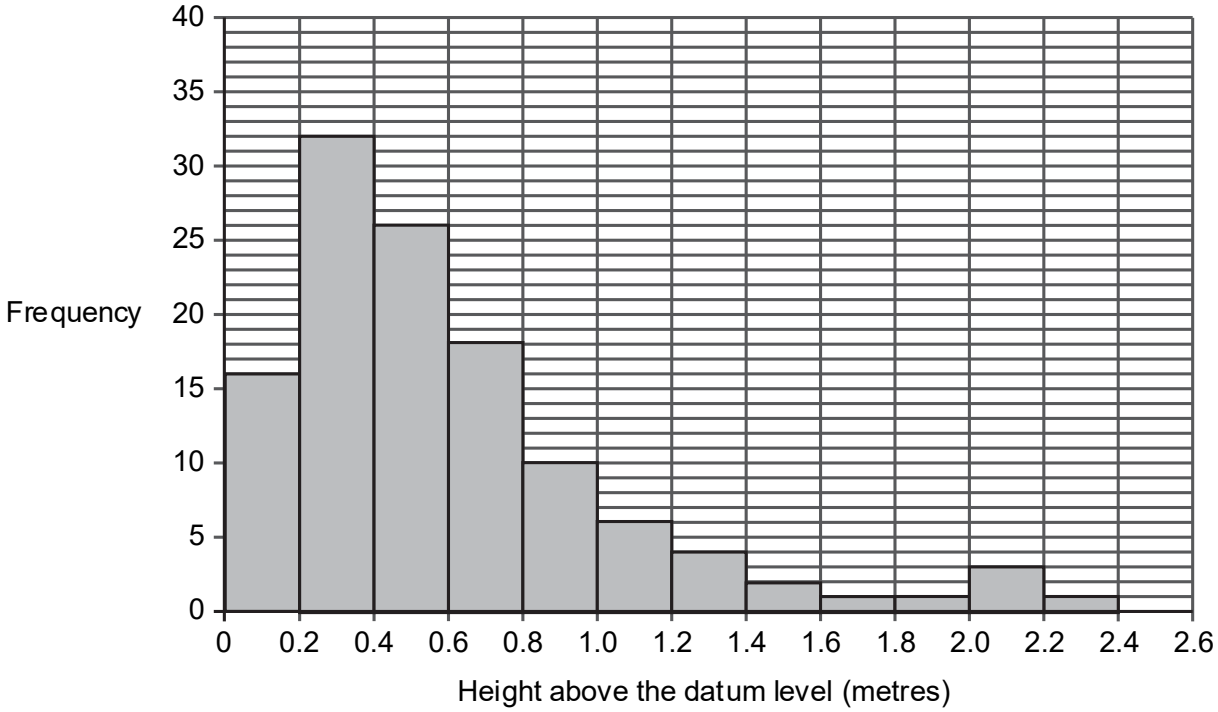
..... **[2]**

(c) Another resident uses the data records to draw this frequency chart.
The chart shows the greatest heights above the datum level from the last 120 years.



(i) Use the frequency chart to find the probability of a flood.

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..... **[2]**

(ii) Taking this new information into account, comment on the work the residents have done so far and advise them on what they should do.

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..... **[3]**

3 A psychology student has devised a test for how easily people do what they are told.

The test places each person in one of three categories: C, D and N.
C - People who will always do what they are told without questioning it.

D - People who will only do what they are told without question if they respect the person asking them.

N - People who will never do what they are told without first questioning it.

The student used the test in an experiment with people who support six different rugby teams to find out if there are differences in how easily they do as they are told.

He tried the test out on groups of rugby supporters attending international rugby matches between the six different teams.

The student stood in the street outside rugby matches and gave out vouchers to participants to get them to take part in his test.

The table shows their results.

Team supported	**C**	**D**	**N**
England	0	0	20
France	6	8	6
Ireland	5	7	8
Italy	6	8	6
Scotland	3	11	6
Wales	10	5	5

(a) Which sampling method did the student use?

Tick (✓) **one** box.

Opportunity ☐

Self-selected ☐

Cluster ☐

Simple random ☐

Quota ☐

Stratified ☐

[1]

(b) The information for England is an outlier.

Explain what this means.

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..... **[1]**

(c) The student carries out a χ^2 test using the data.

State the null and alternative hypotheses for a χ^2 test.

Null hypothesis .....

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Alternative hypothesis.....

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..... **[1]**

(d) **Table 3.1** shows the expected frequencies for the data with the outlier excluded.

Complete **Table 3.1**.

Table 3.1

Expected frequencies	**C**	**D**	**N**	**TOTAL**
France				
Ireland				
Italy			6.2	**20**
Scotland				**20**
Wales				
TOTAL	**30**	**39**		**100**

[2]

(e) **Table 3.2** shows the contributions to the test statistic for a χ^2 test.

Calculate the test statistic for a χ^2 test by first completing **Table 3.2**.

Table 3.2

Contributions to χ^2	**C**	**D**	**N**
France	0		0.006
Ireland	0.167	0.082	0.523
Italy	0		0.006
Scotland	1.5	1.313	0.006
Wales	2.667		0.232

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..... **[2]**

(f) Carry out the χ^2 test.

Use a 5% significance level.

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..... **[4]**

(g) Make **two** comments on the conduct of the experiment.

Comment 1 .....

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Comment 2 .....

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..... **[2]**

Section B (30 marks)

Use the **pre-release data** to answer the questions. A hard copy of the **pre-release data** is provided.

4 **(a)** The sum of the figures in the column headed "Population" in the pre-release data gives a total of 7 174 654 290.

Give **two** reasons why this is **not** the current world population.

Reason 1 .....

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Reason 2 .....

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..... **[2]**

(b) Is the statement below **true** or **false**?

'Over a quarter of the world's population lives in just two countries.'

Tick (✓) **one** box.

Justify your answer.

True ☐

False ☐

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..... **[3]**

(c) (i) Calculate the number of births per year in Ghana.

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..... **[2]**

(ii) Compare the number of births per year in Ghana to the number of births per year in the UK.

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..... **[2]**

5 In the **pre-release data**, GDP per capita is given by country.

(a) Explain how you would use a spreadsheet containing the pre-release data to calculate an estimate of the GDP per capita for the whole world.

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..... **[3]**

(b) Explain what this figure represents.

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..... **[1]**

(c) Demonstrate your method using data from Japan, Nigeria and Sri Lanka.

You can use the table provided to help you.

Country	**Sub region**				
Japan	East & South East Asia				
Nigeria	Africa (Sub-Saharan)				
Sri Lanka	South Asia				

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..... **[4]**

6 A student thinks that valuable insights can be obtained from the pre-release data.

In order to carry out a pilot investigation the student selects this sample of countries.

Algeria	Brazil	Costa Rica	Poland	Tonga
Bangladesh	Cambodia	France	Syria	Zambia
Barbados	Canada	New Zealand	Tajikistan	

(a) Why might the student want to use a sample for a pilot investigation when the full data set is available?

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..... **[1]**

(b) Comment briefly on how it appears this sample was selected.

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..... **[1]**

(c) The student uses this sample to investigate whether there is any association between the birth rate of a country and the life expectancy of its citizens.

They complete a hypothesis test using Spearman's rank correlation coefficient.

(i) Write down null and alternative hypotheses for a 2-tail test.

Null hypothesis .....

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Alternative hypothesis .....

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..... **[1]**

(ii) Complete the table to work out the test statistic.

Country	Birth rate	Rank, x	Life expectancy	Rank, y	$d = x - y$	d^2
Algeria	23.99	4	76.39	6	-2	
Bangladesh	21.61	7	70.65	10	-3	
Barbados	11.97	12	74.99	8		16
Brazil	14.72		73.28	9		0
Cambodia	24.40		63.78			
Canada	10.29		81.67		12	144
Costa Rica	16.08	8	78.23		4	16
France	12.49		81.66		9	81
New Zealand	13.40		80.93	3	7	49
Poland	9.77	14	76.65	5	9	81
Syria	22.76	6	68.41	11	-5	25
Tajikistan	24.99	2	67.06	12	-10	100
Tonga	23.55	5	75.82	7	-2	4
Zambia	42.46	1	51.83	14	-13	169

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..... **[5]**

(iii) Carry out the hypothesis test using Spearman's rank correlation coefficient.

Use a 5% significance level.

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..... **[3]**

(d) The student uses software to work out the product moment correlation coefficient for birth rate and life expectancy for all countries.

The result is −0.84.

Make **two** comments about this figure.

Comment 1.....

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Comment 2.....

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.....**[2]**

END OF QUESTION PAPER

EXTRA ANSWER SPACE

If you need extra space use these lined pages. You must write the question numbers clearly in the margin.

EXTRA ANSWER SPACE

If you need extra space use these lined pages. You must write the question numbers clearly in the margin.

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Sample Assessment Material

Level 3 Certificate in Core Maths B (MEI)

H869/02 Statistical Problem Solving

MARK SCHEME

Duration: 2 hours

MAXIMUM MARK 60

Version – 2.0
Last Updated: September 2025

This document consists of 18 pages

Marking Instructions

Preparation For Marking

1. RM Assessor

- Access and complete the on-screen marking training packages: OCR Examiner Training (RMA3).
- Read the mark scheme and question paper for this component or unit.
- The mark scheme and question paper are available in RM Assessor or on your Component Page if you use the Training Platform for standardisation.
- Log in to RM Assessor and mark the **required number** of practice scripts and the **required number** of standardisation scripts.

Marking

2. General Guidance

- Mark strictly to the mark scheme.
- Marks awarded must relate directly to the marking criteria.
- If you are in any doubt about applying the mark scheme, consult your Team Leader by phone, email or via the RM Assessor messaging system.
- It is **essential** that you meet the RM Assessor 50% and 100% batch deadlines. For traditional marking this will be 40% and 100%. If you experience problems, contact your Team Leader without delay.
- Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there, then add the annotation '**SEEN**' to confirm that the work has been seen and mark any responses using the annotations in Section 11.
- The RM Assessor **comments box** is used by your Team Leader to explain the marking of the practice responses. Use these comments when checking your practice responses. **Do not use the comments box for any other reason.**

- **Before the end of the marking period** send *a brief report on the performance of candidates to your Team Leader via email. The report should contain notes on strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.*

3. No Response and Crossed-out Answers

Using the No Response (NR) option. Only mark as NR if:

- the answer space is blank
- there is only a comment not related to the question (e.g., 'can't do', 'don't know')
- there is only a mark (e.g., a dash, a question mark) which is not an attempt at the question.

Note: Enter 0 marks for an attempt that earns no credit (including copying out the question). Do **not** use NR.

Crossed-out answers
If a candidate has crossed out an answer and written a clear alternative, do **not** mark the crossed-out answer.

If a candidate has crossed out an answer and **not** written a clear alternative, mark the crossed-out answer if it is readable.

4. Responses with more answers than needed

- **Multiple-choice question answers**
  When a multiple-choice question has only **one** correct answer and a candidate has written two or more answers (even if one of these answers is correct), do **not** award a mark.

  When a multiple-choice question asks candidates to select **more than** one option the marking guidance from your Principal Examiner will ensure consistency of approach.

Contradictory answers in points-based questions
Do **not** award any marks, even if one of the answers is correct.

- **Rubric error answers – optional questions**
  Where candidates have a choice of question/s and they provide more answers than required, all responses are marked and entered into RM Assessor. The highest mark allowable within the rubric will automatically be selected.

- **Questions that ask for a set number (including 1) of short answers or points**
  Mark only the **first set number** of answers/points. (e.g. **two** reasons for something)

  First mark the answers/points against printed numbers on the answer lines. Mark the first answer/point against each printed number. **Second**, if candidates have not followed the printed numbers, mark the answers/points from left to right on each line. **Third,** mark line by line until the set number of answers/points have been marked. Do **not** mark any remaining answers/points.

  Examiners should use their own judgement to decide if a 'second answer' on the same line is adding more detail to the first answer, or if it is a completely separate answer.

- Short Answer Questions **(requiring a more developed response, worth two or more marks**)
  If the candidates are required to provide a description of, for example, three items and four items are provided, mark line by line until the set number of descriptions have been marked (it is unlikely a candidate will provide more than one response on each line in this scenario).

- Longer Answer Questions **(requiring a developed response)**
  If a candidate has written two or more answers to a question that only requires one (developed) answer, only mark the first answer (which has not been crossed out).

5. Annotations available in RM Assessor

Annotation	Meaning
✓and ✗	
BOD	Benefit of doubt
FT	Follow through
ISW	Ignore subsequent working
M0, M1	Method mark awarded 0, 1
A0, A1	Accuracy mark awarded 0, 1
B0, B1	Independent mark awarded 0, 1
SC	Special case
^	Omission sign
MR	Misread
Highlighting	

6. Abbreviations, annotations and conventions used in the mark scheme (including subject-specific conventions).

Abbreviation / Annotation	Meaning
E1	Mark for explaining
U1	Mark for correct units
G1	Mark for a correct feature on a graph
M1 dep*	Method mark dependent on a previous mark, indicated by *
cao	Correct answer only
oe	Or equivalent
rot	Rounded or truncated
soi	Seen or implied
www	Without wrong working

7. Subject Specific Marking Instructions

a. Annotations must be used during your marking. For a response awarded zero (or full) marks a single appropriate annotation (cross, tick, M0 or ^) is sufficient, but not required.

For responses that are not awarded either 0 or full marks, you must make it clear how you have arrived at the mark you have awarded and all responses must have enough annotation for a reviewer to decide if the mark awarded is correct without having to mark it independently.

It is vital that you annotate standardisation scripts fully to show how the marks have been awarded.

Award NR (No Response)
- if there is nothing written at all in the answer space and no attempt elsewhere in the script
- OR if there is a comment which does not in any way relate to the question (e.g. 'can't do', 'don't know')
- OR if there is a mark (e.g. a dash, a question mark, a picture) which isn't an attempt at the question.

Note: Award 0 marks only for an attempt that earns no credit (including copying out the question).

If a candidate uses the answer space for one question to answer another, for example using the space for 8(b) to answer 8(a), then give benefit of doubt unless it is ambiguous for which part it is intended.

b. An element of professional judgement is required in the marking of any written paper. Remember that the mark scheme is designed to assist in marking incorrect solutions. Correct solutions leading to correct answers are awarded full marks but work must not always be judged on the answer alone, and answers that are given in the question, especially, must be validly obtained; key steps in the working must always be looked at and anything unfamiliar must be investigated thoroughly. Correct but unfamiliar or unexpected methods are often signalled by a correct result following an apparently incorrect method. Such work must be carefully assessed. When a candidate adopts a method which does not correspond to the mark scheme, escalate the question to your Team Leader who will decide on a course of action with the Principal Examiner.

If you are in any doubt whatsoever you should contact your Team Leader.

c. The following types of marks are available.

M

A suitable method has been selected and applied in a manner which shows that the method is essentially understood. Method marks

are not usually lost for numerical errors, algebraic slips or errors in units. However, it is not usually sufficient for a candidate just to indicate an intention of using some method or just to quote a formula; the formula or idea must be applied to the specific problem in hand, e.g. by substituting the relevant quantities into the formula. In some cases the nature of the errors allowed for the award of an M mark may be specified.
A method mark may usually be implied by a correct answer unless the question includes the DR statement, the command words "Determine" or "Show that", or some other indication that the method must be given explicitly.

A
Accuracy mark, awarded for a correct answer or intermediate step correctly obtained. Accuracy marks cannot be given unless the associated Method mark is earned (or implied). Therefore M0 A1 cannot ever be awarded.

B
Mark for a correct result or statement independent of Method marks.

E
A given result is to be established or a result has to be explained. This usually requires more working or explanation than the establishment of an unknown result.

Unless otherwise indicated, marks once gained cannot subsequently be lost, e.g. wrong working following a correct form of answer is ignored. Sometimes this is reinforced in the mark scheme by the abbreviation isw. However, this would not apply to a case where a candidate passes through the correct answer as part of a wrong argument.

d. When a part of a question has two or more 'method' steps, the M marks are in principle independent unless the scheme specifically says otherwise; and similarly where there are several B marks allocated. (The notation 'dep*' is used to indicate that a particular mark is dependent on an earlier, asterisked, mark in the scheme.) Of course, in practice it may happen that when a candidate has once gone wrong in a part of a question, the work from there on is worthless so that no more marks can sensibly be given. On the other hand, when two or more steps are successfully run together by the candidate, the earlier marks are implied and full credit must be given.

e. The abbreviation FT implies that the A or B mark indicated is allowed for work correctly following on from previously incorrect results. Otherwise, A and B marks are given for correct work only – differences in notation are of course permitted. A (accuracy) marks are not given for answers obtained from incorrect working. When A or B marks are awarded for work at an intermediate stage of a solution, there may be various alternatives that are equally acceptable. In such cases, what is acceptable will be detailed in the mark scheme. If this is not the case please, escalate the question to your Team Leader who will decide on a course of action with the Principal Examiner.

Sometimes the answer to one part of a question is used in a later part of the same question. In this case, A marks will often be 'follow through'. In such cases you must ensure that you refer back to the answer of the previous part question even if this is not shown within the image zone. You may find it easier to mark follow through questions candidate-by-candidate rather than question-by-question.

f. We are usually quite flexible about the accuracy to which the final answer is expressed; over-specification is usually only penalised where the scheme explicitly says so.
   - When a value is given in the paper only accept an answer correct to at least as many significant figures as the given value.
   - When a value is not given in the paper accept any answer that agrees with the correct value to 3 s.f. unless a different level of accuracy has been asked for in the question, or the mark scheme specifies an acceptable range.
     NB for Specification B (MEI) the rubric is not specific about the level of accuracy required, so this statement reads "2 s.f".

   Follow through should be used so that only one mark in any question is lost for each distinct accuracy error.
   Candidates using a value of 9.80, 9.81 or 10 for g should usually be penalised for any final accuracy marks which do not agree to the value found with 9.8 which is given in the rubric.

g. Rules for replaced work and multiple attempts:
   - If one attempt is clearly indicated as the one to mark, or only one is left uncrossed out, then mark that attempt and ignore the others.
   - If more than one attempt is left not crossed out, then mark the last attempt unless it only repeats part of the first attempt or is substantially less complete.
   - if a candidate crosses out all of their attempts, the assessor should attempt to mark the crossed out answer(s) as above and award marks appropriately.

h. For a genuine misreading (of numbers or symbols) which is such that the object and the difficulty of the question remain unaltered, mark according to the scheme but following through from the candidate's data. A penalty is then applied; 1 mark is generally appropriate, though this may differ for some units. This is achieved by withholding one A or B mark in the question. Marks designated as cao may be awarded as long as there are no other errors.
   If a candidate corrects the misread in a later part, do not continue to follow through. Note that a miscopy of the candidate's own working is not a misread but an accuracy error.

i. If in any case the scheme operates with considerable unfairness consult your Team Leader.

Question			Answer	Marks	AO	Guidance
1	(a)		5 + 1 + 1 + 2 + 3 = 12	B1 [1]	AO3	Adding the frequencies from the chart
1	(b)		The number of fledglings is 0 + 2 + 3 + 8 + 15 = 28	B1 [1]	AO2	CAO
1	(c)	(i)	Females not taken by predators are 25% of 14 = 3.5 Over 3 years there will be 3 × 3.5 = 10.5 new breeding females This is fewer than the 12 original females so the population will decline	B1 B1 B1 [3]	AO2 AO2 AO3	FT *their* number of fledglings throughout
1	(c)	(ii)	Two distinct comments e.g. • The calculation involves major modelling assumptions so the conclusion must be treated with caution. • There may be other causes; pesticides may not be to blame. • The results are from only one breeding season so may not be typical. • There is no evidence about where the birds catch their insects. • The fact that 5 out of the 12 females produced no young might be better evidence to present to the farmer.	B1 B1 [2]	AO3 AO3	Any two sensible comments. B1 for each distinct comment
			Total	[7]		

Question			Answer	Marks	AO	Guidance
2	(a)		$z = \frac{2.00 - 0.61}{0.48}$	M1	AO2	Attempt to find P(height > 2) Correct mean and standard deviation used – implied by correct answer
			$z = 2.8958...$	A1	AO1	
			Probability that the water rises at least 2 metres $= 1 - \phi(2.8958...) = 1 - 0.9981 = 0.0019$	A1	AO1	
				[3]		
2	(b)		$\frac{1}{500} = 0.002 \approx 0.0019$	B1	AO2	OR $0.0019 = \frac{1}{526} \approx \frac{1}{500}$
			Comparison of 0.002 to 0.0019 from (a) and 'true' selected.	E1	AO3	OR comparison of $\frac{1}{526}$ and $\frac{1}{500}$ and 'true' selected.
				[2]		
2	(c)	(i)	$\frac{4}{120}$	M1	AO2	Correct numerator
			$\frac{1}{30} \approx 0.033$	A1	AO1	Simplified fraction or decimal
				[2]		
2	(c)	(ii)	The graph does not have the symmetrical shape of a Normal distribution so the Normal model is not appropriate.	B1	AO3	Any three sensible statements
			There have been 4 floods in the last 120 years and 3 of them have been recent which suggests that the situation may be changing.	B1	AO2	
			The residents should concentrate on the distribution of recent data.	B1	AO3	
			They should probably claim funding for flood defenses.			
				[3]		
			Total	**[10]**		

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>AO</th><th>Guidance</th></tr>
<tr><td>3</td><td>(a)</td><td></td><td>Opportunity sampling</td><td>B1
[1]</td><td>AO1</td><td></td></tr>
<tr><td>3</td><td>(b)</td><td></td><td>Reasonable explanation given; e.g. it is inconsistent with the rest of the data.</td><td>B1
[1]</td><td>AO1</td><td></td></tr>
<tr><td>3</td><td>(c)</td><td></td><td>H_0: The proportions in the different categories are independent of the team supported. H_1: The proportions are not independent of the team supported.</td><td>B1
[1]</td><td>AO2</td><td></td></tr>
<tr><td>3</td><td>(d)</td><td></td><td><table><tr><th>Expected frequencies</th><th>C</th><th>D</th><th>N</th><th>TOTAL</th></tr><tr><td>France</td><td>6</td><td>7.8</td><td>6.2</td><td>20</td></tr><tr><td>Ireland</td><td>6</td><td>7.8</td><td>6.2</td><td>20</td></tr><tr><td>Italy</td><td>6</td><td>7.8</td><td>6.2</td><td>20</td></tr><tr><td>Scotland</td><td>6</td><td>7.8</td><td>6.2</td><td>20</td></tr><tr><td>Wales</td><td>6</td><td>7.8</td><td>6.2</td><td>20</td></tr><tr><td>TOTAL</td><td>30</td><td>39</td><td>31</td><td>100</td></tr></table></td><td>B1
B1
[2]</td><td>AO1
AO1</td><td>All totals correct
All rows correct and identical</td></tr>
<tr><td>3</td><td>(e)</td><td></td><td><table><tr><th>Contributions to χ^2</th><th>C</th><th>D</th><th>N</th></tr><tr><td>France</td><td>0</td><td>0.005</td><td>0.006</td></tr><tr><td>Ireland</td><td>0.167</td><td>0.082</td><td>0.523</td></tr><tr><td>Italy</td><td>0</td><td>0.005</td><td>0.006</td></tr><tr><td>Scotland</td><td>1.5</td><td>1.313</td><td>0.006</td></tr><tr><td>Wales</td><td>2.667</td><td>1.005</td><td>0.232</td></tr></table>$X^2 = 7.52$</td><td>B1
B1
[2]</td><td>AO1
AO1</td><td>Missing values correct</td></tr>
</table>

Question			Answer	Marks	AO	Guidance
3	(f)		$v = (5 - 1) \times (3 - 1) = 8$	B1	AO1	
			Critical value for 5% significance level is 15.51	B1	AO2	
			Since 7.52 < 15.51 (the null hypothesis is accepted).	B1	AO3	Comparison of test statistic with significance level
			There is insufficient evidence to support the alternative hypothesis that how easily people do as they are told is not independent of the team supported.	B1 [4]	AO3	
3	(g)		The data was not random. Rugby supporters may not be representative of that nation's population. A street does not provide good working conditions for a psychology test. The respondents may well have worked collaboratively rather than on their own. Accepting a voucher from the student may have influenced respondents. It is possible that there was an uneven gender balance among the respondents.	B1 B1 [2]	AO3 AO3	Two marks for sensible statements
			Total	**[13]**		

Question			Answer	Marks	AO	Guidance
4	(a)		Some countries (small islands) may not have been included. The population has changed since the data were collected. The original data were probably not as accurate as presented. People are being born all the time so more people may have been born since this data was collected.	B1 B1 [2]	AO3 AO3	Any two sensible statements
4	(b)		Identifying India and China 1 236 344 631 + 1 355 692 576 = 2 592 037 207 One quarter of the world's population is ¼ of 7 174 654 290 = 1 793 663 573 and 'true' selected.	B1 B1 B1 [3]	AO2 AO1 AO3	
4	(c)	(i)	Ghana 25 758 108 × 31.40 ÷ 1000 = 808 804	M1 A1 [2]	AO2 AO1	
4	(c)	(ii)	UK 63 742 977 × 12.22 ÷ 1000 = 778 939 So the numbers are very close	A1 E1 [2]	AO2 AO3	OR Ghana has more babies
			Total	[9]		

<table>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>AO</th><th>Guidance</th></tr>
<tr><td>5</td><td>(a)</td><td></td><td>Make a new column of Population × GDP
Sum it
Divide the total by the total world population</td><td>B1
B1
B1
[3]</td><td>AO2
AO2
AO2</td><td>Accept any equivalent method</td></tr>
<tr><td>5</td><td>(b)</td><td></td><td>It is [roughly] each person’s share if the world’s wealth [as measured by GDP] were distributed equally.</td><td>B1
[1]</td><td>AO3</td><td>Accept any reasonable statement</td></tr>
<tr><td>5</td><td>(c)</td><td></td><td>
<table>
<tr><td>A</td><td>B Population</td><td>C GDP per capita</td><td>= B × C</td></tr>
<tr><td>Japan</td><td>127 103 388</td><td>37100</td><td>4.7155×10^{12}</td></tr>
<tr><td>Nigeria</td><td>177 155 754</td><td>2800</td><td>4.960×10^{11}</td></tr>
<tr><td>Sri Lanka</td><td>21 866 445</td><td>6500</td><td>1.421×10^{11}</td></tr>
<tr><td>Total</td><td>326 125 587</td><td></td><td>5.3537×10^{12}</td></tr>
</table>
GDP = $5.3537 \times 10^{12} \div 326\ 125\ 587$ = $16 416</td><td>M1
M1
A1
B1
[4]</td><td>AO2
AO2
AO2
AO2</td><td>Correct headings, may be implied
Appropriate entries
Fully correct table
FT</td></tr>
<tr><td colspan="3">Total</td><td>[8]</td><td></td><td></td></tr>
</table>

Question			Answer	Marks	AO	Guidance
6	(a)		It can be easier to spot patterns in a small data set that you can see on one screen or sheet of paper **OR** Limited amount of time to carry out a pilot investigation and using a sample would be quicker.	**B1** **[1]**	**AO3**	
6	(b)		One country has been selected for each sub region.	**B1** **[1]**	**AO2**	So it is a type of stratified sample (but there is no proportionality).
6	(c)	(i)	H_0: There is no association between birth rate and life expectancy H_1: Birth rate and life expectancy are associated	**B1** **[1]**	**AO2**	Accept equivalent 1-tail H_1

Question			Answer							Marks	AO	Guidance
6	(c)	(ii)	**Country**	**Birth rate**	**Rank, x**	**Life expectancy**	**Rank, y**	$d = x - y$	d^2			
			Algeria	23.99	4	76.39	6	-2	4	**B1**	**AO2**	Rankings
			Bangladesh	21.61	7	70.65	10	-3	9			
			Barbados	11.97	12	74.99	8	4	16	**B1**	**AO1**	Finding d and d^2
			Brazil	14.72	9	73.28	9	0	0			
			Cambodia	24.40	3	63.78	13	-10	100			
			Canada	10.29	13	81.67	1	12	144			
			Costa Rica	16.08	8	78.23	4	4	16			
			France	12.49	11	81.66	2	9	81			
			New Zealand	13.40	10	80.93	3	7	49			
			Poland	9.77	14	76.65	5	9	81			
			Syria	22.76	6	68.41	11	-5	25			
			Tajikistan	24.99	2	67.06	12	-10	100			
			Tonga	23.55	5	75.82	7	-2	4			
			Zambia	42.46	1	51.83	14	-13	169			
								TOTAL	798	**B1**	**AO1**	Summing d^2, may be seen as part of formula
			$r_s = 1 - \frac{6 \times 798}{14 \times (14^2 - 1)}$							**B1**	**AO2**	Substituting into r
			$= -0.754$							**B1**	**AO1**	Finding r_S
										[5]		
6	(c)	(iii)	At the 5% significance level the critical value for $n = 14$ is 0.5385							**B1**	**AO2**	
			-0.754 < -0.5385 so the result is significant.							**B1**	**AO3**	
			The evidence supports the alternative hypothesis that birth rate and life expectancy are associated.							**E1**	**AO3**	
										[3]		

Question			Answer	Marks	AO	Guidance
6	(d)		The negative sign shows that low birth rate is associated with high life expectancy. OE The high value shows that there is a strong correlation.	**B1** **B1** **[2]**	**AO3** **AO3**	
			Total	**[13]**		

Level 3 Certificate in Core Maths B (MEI)

H869/02 Statistical Problem Solving

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Algeria	Africa (Saharan)	38813722	34	76.39	80	23.99	63	7500	137
Egypt	Africa (Saharan)	86895099	16	73.45	122	23.35	68	6600	144
Libya	Africa (Saharan)	6244174	108	76.04	86	18.4	104	11300	109
Morocco	Africa (Saharan)	32987206	39	76.51	78	18.47	100	5500	155
Tunisia	Africa (Saharan)	10937521	79	75.68	92	16.9	112	9900	119
Angola	Africa (Sub-Saharan)	19088106	59	55.29	205	38.97	9	6300	148
Benin	Africa (Sub-Saharan)	10160556	88	61.07	191	36.51	20	1600	202
Botswana	Africa (Sub-Saharan)	2155784	145	54.06	210	21.34	77	16400	82
Burkina Faso	Africa (Sub-Saharan)	18365123	60	54.78	207	42.42	5	1500	203
Burundi	Africa (Sub-Saharan)	10395931	86	59.55	196	42.33	6	600	225
Cabo Verde	Africa (Sub-Saharan)	538535	173	71.57	145	20.72	82	4400	167
Cameroon	Africa (Sub-Saharan)	23130708	54	57.35	202	36.58	19	2400	188
Central African Republic	Africa (Sub-Saharan)	5277959	118	51.35	218	35.45	23	700	224
Chad	Africa (Sub-Saharan)	11412107	77	49.44	223	37.29	16	2500	184
Comoros	Africa (Sub-Saharan)	766865	164	63.48	184	29.05	44	1300	209
Congo, Democratic Republic of the	Africa (Sub-Saharan)	77433744	20	56.54	203	35.62	22	400	228
Congo, Republic of the	Africa (Sub-Saharan)	4662446	125	58.52	198	36.59	18	4800	162
Cote d'Ivoire	Africa (Sub-Saharan)	22848945	55	58.01	200	29.25	43	1800	196
Djibouti	Africa (Sub-Saharan)	810179	163	62.4	187	24.08	62	2700	181
Equatorial Guinea	Africa (Sub-Saharan)	722254	167	63.49	183	33.83	32	25700	58
Eritrea	Africa (Sub-Saharan)	6380803	107	63.51	181	30.69	41	1200	212
Ethiopia	Africa (Sub-Saharan)	96633458	14	60.75	193	37.66	14	1300	211
Gabon	Africa (Sub-Saharan)	1672597	154	52.06	214	34.64	27	19200	72
Gambia, The	Africa (Sub-Saharan)	1925527	150	64.36	176	31.75	37	2000	195

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Ghana	Africa (Sub-Saharan)	25758108	49	65.75	172	31.40	38	3500	174
Guinea	Africa (Sub-Saharan)	11474383	76	59.6	195	36.02	21	1100	215
Guinea-Bissau	Africa (Sub-Saharan)	1693398	153	49.87	221	33.83	31	1200	213
Kenya	Africa (Sub-Saharan)	45010056	31	63.52	180	28.27	45	1800	198
Lesotho	Africa (Sub-Saharan)	1942008	149	52.65	211	25.92	49	2200	192
Liberia	Africa (Sub-Saharan)	4092310	128	58.21	199	35.07	26	700	223
Madagascar	Africa (Sub-Saharan)	23201926	53	65.2	174	33.12	33	1000	219
Malawi	Africa (Sub-Saharan)	17377468	64	59.99	194	41.8	7	900	221
Mali	Africa (Sub-Saharan)	16455903	67	54.95	206	45.53	2	1100	217
Mauritania	Africa (Sub-Saharan)	3516806	133	62.28	188	31.83	36	2200	191
Mauritius	Africa (Sub-Saharan)	1331155	156	75.17	98	13.46	149	16100	86
Mozambique	Africa (Sub-Saharan)	24692144	51	52.6	213	38.83	11	1200	214
Namibia	Africa (Sub-Saharan)	2198406	143	51.85	215	20.28	83	8200	132
Niger	Africa (Sub-Saharan)	17466172	63	54.74	208	46.12	1	800	222
Nigeria	Africa (Sub-Saharan)	177155754	8	52.62	212	38.03	12	2800	180
Rwanda	Africa (Sub-Saharan)	12337138	74	59.26	197	34.61	28	1500	204
Saint Helena, Ascension and Tristan da Cunha	Africa (Sub-Saharan)	7776	228	79.21	45	10.03	191	7800	135
Sao Tome and Principe	Africa (Sub-Saharan)	190428	186	64.22	177	35.12	24	2200	190
Senegal	Africa (Sub-Saharan)	13635927	73	60.95	192	35.09	25	2100	193
Seychelles	Africa (Sub-Saharan)	91650	198	74.25	113	14.54	136	25900	57
Sierra Leone	Africa (Sub-Saharan)	5743725	112	57.39	201	37.4	15	1400	208
Somalia	Africa (Sub-Saharan)	10428043	85	51.58	217	40.87	8	600	227
South Africa	Africa (Sub-Saharan)	48375645	28	49.56	222	18.94	93	11500	108
South Sudan	Africa (Sub-Saharan)	11562695	75	#N/A	#N/A	37.68	13	1400	207

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Sudan	Africa (Sub-Saharan)	35482233	37	63.32	185	30.01	42	2600	182
Swaziland	Africa (Sub-Saharan)	1419623	155	50.54	219	25.18	54	5700	154
Tanzania	Africa (Sub-Saharan)	49639138	26	61.24	190	36.82	17	1700	200
Togo	Africa (Sub-Saharan)	7351374	100	64.06	178	34.52	29	1100	218
Uganda	Africa (Sub-Saharan)	35918915	36	54.46	209	44.17	3	1500	206
Western Sahara	Africa (Sub-Saharan)	554795	172	62.27	189	30.71	40	2500	187
Zambia	Africa (Sub-Saharan)	14638505	71	51.83	216	42.46	4	1800	199
Zimbabwe	Africa (Sub-Saharan)	13771721	72	55.68	204	32.47	34	600	226
Australia	Australasia	22507617	56	82.07	10	12.19	162	43000	19
New Zealand	Australasia	4401916	127	80.93	26	13.4	151	30400	46
Papua New Guinea	Australasia	6552730	106	66.85	168	24.89	57	2900	178
Christmas Island	Oceania	1530	235	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Cocos (Keeling) Islands	Oceania	596	239	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Cook Islands	Oceania	10134	226	75.38	95	14.7	135	9100	123
Fiji	Oceania	903207	162	72.15	139	19.86	87	4900	161
French Polynesia	Oceania	280026	182	76.79	73	15.47	131	22000	67
Guam	Oceania	161001	188	78.82	50	17.01	110	28700	53
Kiribati	Oceania	104488	194	65.47	173	21.85	75	6400	146
Marshall Islands	Oceania	70983	203	72.58	133	26.36	47	8700	127
Micronesia, Federated States of	Oceania	105681	193	72.35	135	20.97	80	7300	140
Nauru	Oceania	9488	227	66.4	169	25.61	51	5000	160
New Caledonia	Oceania	267840	183	77.31	68	15.57	128	37700	33
Niue	Oceania	1190	237	#N/A	#N/A	#N/A	#N/A	5800	153
Norfolk Island	Oceania	2210	233	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Northern Mariana Islands	Oceania	51483	210	77.64	63	18.94	94	13600	98
Palau	Oceania	21186	220	72.6	132	10.95	177	10500	116
Pitcairn Islands	Oceania	48	240	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Samoa	Oceania	196628	185	73.21	128	21.29	78	6200	149
Solomon Islands	Oceania	609883	169	74.89	105	26.33	48	3400	175
Tokelau	Oceania	1337	236	#N/A	#N/A	#N/A	#N/A	1000	220
Tonga	Oceania	106440	192	75.82	88	23.55	66	8200	133
Tuvalu	Oceania	10782	225	65.81	171	23.74	64	3500	173
Vanuatu	Oceania	266937	184	72.72	131	25.69	50	4800	164
Wallis and Futuna	Oceania	15561	224	79.42	44	13.56	148	3800	172
American Samoa	Oceania	54517	208	74.91	104	22.87	72	8000	134
Anguilla	Caribbean	16086	221	81.2	21	12.68	157	12200	104
Antigua and Barbuda	Caribbean	91295	199	76.12	85	15.94	124	18400	76
Aruba	Caribbean	110663	190	76.35	82	12.65	158	25300	59
Bahamas, The	Caribbean	321834	179	71.93	140	15.65	126	32000	43
Barbados	Caribbean	289680	181	74.99	102	11.97	166	25100	60
British Virgin Islands	Caribbean	32680	216	78.29	57	10.83	180	42300	22
Cayman Islands	Caribbean	54914	207	81.02	24	12.13	164	43800	17
Cuba	Caribbean	11047251	78	78.22	59	9.9	195	10200	117
Curacao	Caribbean	146836	189	#N/A	#N/A	#N/A	#N/A	15000	91
Dominica	Caribbean	73449	202	76.59	77	15.53	130	14300	94
Dominican Republic	Caribbean	10349741	87	77.8	62	18.97	92	9700	121
Grenada	Caribbean	110152	191	73.8	120	16.3	120	13800	96
Haiti	Caribbean	9996731	89	63.18	186	22.83	73	1300	210
Jamaica	Caribbean	2930050	140	73.48	121	18.41	102	9000	125

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Montserrat	Caribbean	5215	231	73.9	119	11.31	174	8500	128
Puerto Rico	Caribbean	3620897	130	79.09	47	10.9	178	16300	84
Saint Barthelemy	Caribbean	7267	229	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Saint Kitts and Nevis	Caribbean	51538	209	75.29	96	13.64	146	16300	83
Saint Lucia	Caribbean	163362	187	77.41	67	13.94	141	13100	100
Saint Martin	Caribbean	31530	217	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Saint Vincent and the Grenadines	Caribbean	102918	196	74.86	106	13.85	144	12100	106
Sint Maarten	Caribbean	39689	213	77.61	65	13	154	15400	89
Trinidad and Tobago	Caribbean	1223916	159	72.29	136	13.8	145	20300	70
Turks and Caicos Islands	Caribbean	49070	212	79.55	43	16.61	119	29100	52
Virgin Islands	Caribbean	104170	195	79.75	40	10.49	184	14500	92
Belize	Central America	340844	178	68.49	160	25.14	55	8800	126
Costa Rica	Central America	4755234	124	78.23	58	16.08	123	12900	102
El Salvador	Central America	6125512	109	74.18	114	16.79	115	7500	138
Guatemala	Central America	14647083	70	71.74	143	25.46	52	5300	157
Honduras	Central America	8598561	94	70.91	147	23.66	65	4800	163
Nicaragua	Central America	5848641	111	72.72	130	18.41	103	4500	166
Panama	Central America	3608431	131	78.3	56	18.61	98	16500	81
Kazakhstan	Central Asia	17948816	62	70.24	150	19.61	88	14100	95
Kyrgyzstan	Central Asia	5604212	114	70.06	153	23.33	69	2500	185
Russia	Central Asia	142470272	10	70.16	151	11.87	168	18100	77
Tajikistan	Central Asia	8051512	97	67.06	166	24.99	56	2300	189
Turkmenistan	Central Asia	5171943	120	69.47	155	19.46	89	9700	122
Uzbekistan	Central Asia	28929716	45	73.29	125	17.02	109	3800	170

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Brunei	East & South East Asia	422675	175	76.77	74	17.49	107	54800	11
Burma	East & South East Asia	55746253	25	65.94	170	18.65	97	1700	201
Cambodia	East & South East Asia	15458332	69	63.78	179	24.4	60	2600	183
China	East & South East Asia	1355692576	1	75.15	100	12.17	163	9800	120
Hong Kong	East & South East Asia	7112688	102	82.78	6	9.38	204	52700	14
Indonesia	East & South East Asia	253609643	5	72.17	137	17.04	108	5200	158
Japan	East & South East Asia	127103388	11	84.46	3	8.07	222	37100	36
Korea, North	East & South East Asia	24851627	50	69.81	154	14.51	138	1800	197
Korea, South	East & South East Asia	49039986	27	79.8	39	8.26	220	33200	42
Laos	East & South East Asia	6803699	104	63.51	182	24.76	58	3100	177
Macau	East & South East Asia	587914	170	84.48	2	8.98	209	82400	4
Malaysia	East & South East Asia	30073353	44	74.52	110	20.06	85	17500	79
Mongolia	East & South East Asia	2953190	139	68.98	158	20.88	81	5900	152
Philippines	East & South East Asia	107668231	13	72.48	134	24.24	61	4700	165
Singapore	East & South East Asia	5567301	116	84.38	4	8.1	221	62400	7
Taiwan	East & South East Asia	23359928	52	79.84	38	8.55	216	39600	28
Thailand	East & South East Asia	67741401	21	74.18	115	11.26	175	9900	118
Timor-Leste	East & South East Asia	1201542	160	67.39	164	34.48	30	21400	68
Vietnam	East & South East Asia	93421835	15	72.91	129	16.26	121	4000	169
Albania	Europe (Eastern)	3020209	138	77.96	60	12.73	156	8200	131
Belarus	Europe (Eastern)	9608058	93	72.15	138	10.86	179	16100	85
Bosnia and Herzegovina	Europe (Eastern)	3871643	129	76.33	84	8.89	211	8300	130
Bulgaria	Europe (Eastern)	6924716	103	74.33	112	8.92	210	14400	93
Croatia	Europe (Eastern)	4470534	126	76.41	79	9.49	201	17800	78
Czech Republic	Europe (Eastern)	10627448	83	78.31	55	9.79	199	26300	56

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Estonia	Europe (Eastern)	1257921	158	74.07	118	10.29	187	22400	66
Hungary	Europe (Eastern)	9919128	90	75.46	93	9.26	207	19800	71
Kosovo	Europe (Eastern)	1859203	151	#N/A	#N/A	#N/A	#N/A	7600	136
Moldova	Europe (Eastern)	3583288	132	70.12	152	12.21	161	3800	171
Montenegro	Europe (Eastern)	650036	168	#N/A	#N/A	10.59	182	11900	107
Poland	Europe (Eastern)	38346279	35	76.65	76	9.77	200	21100	69
Romania	Europe (Eastern)	21729871	58	74.69	108	9.27	206	13200	99
Serbia	Europe (Eastern)	7209764	101	75.02	101	9.13	208	11100	111
Slovakia	Europe (Eastern)	5443583	117	76.69	75	10.01	192	24700	61
Slovenia	Europe (Eastern)	1988292	148	77.83	61	8.54	217	27400	55
Ukraine	Europe (Eastern)	44291413	32	69.14	156	9.41	203	7400	139
Akrotiri	Europe (Western)	15700	223	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Andorra	Europe (Western)	85458	201	82.65	7	8.48	218	37200	35
Austria	Europe (Western)	8223062	95	80.17	32	8.76	214	42600	21
Belgium	Europe (Western)	10449361	84	79.92	36	9.99	193	37800	32
Cyprus	Europe (Western)	1172458	161	78.34	54	11.44	172	24500	62
Denmark	Europe (Western)	5569077	115	79.09	48	10.22	190	37800	31
Dhekelia	Europe (Western)	15700	222	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Faroe Islands	Europe (Western)	49947	211	80.11	34	13.57	147	30500	45
Finland	Europe (Western)	5268799	119	79.69	41	10.35	186	35900	37
France	Europe (Western)	66259012	22	81.66	15	12.49	159	35700	38
Germany	Europe (Western)	80996685	18	80.44	28	8.42	219	39500	29
Gibraltar	Europe (Western)	29185	219	79.13	46	14.15	139	43000	20
Greece	Europe (Western)	10775557	81	80.3	30	8.8	213	23600	63
Guernsey	Europe (Western)	65849	205	82.39	9	9.89	196	44600	16

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Holy See (Vatican City)	Europe (Western)	842	238	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Iceland	Europe (Western)	317351	180	81.22	20	13.09	153	40700	27
Ireland	Europe (Western)	4832765	123	80.56	27	15.18	132	41300	25
Isle of Man	Europe (Western)	86866	200	80.98	25	11.17	176	53800	12
Italy	Europe (Western)	61680122	24	82.03	11	8.84	212	29600	51
Jersey	Europe (Western)	96513	197	81.66	16	11.65	170	57000	8
Latvia	Europe (Western)	2165165	144	73.44	123	9.79	198	19100	73
Liechtenstein	Europe (Western)	37313	214	81.68	13	10.53	183	89400	2
Lithuania	Europe (Western)	3505738	134	75.98	87	9.36	205	22600	65
Luxembourg	Europe (Western)	520672	174	80.01	35	11.75	169	77900	5
Macedonia	Europe (Western)	2091719	147	75.8	89	11.64	171	10800	113
Malta	Europe (Western)	412655	176	80.11	33	10.24	189	27500	54
Monaco	Europe (Western)	30508	218	89.57	1	6.72	224	65500	6
Netherlands	Europe (Western)	16877351	66	81.12	22	10.83	181	41400	24
Norway	Europe (Western)	5147792	121	81.6	17	12.09	165	55400	10
Portugal	Europe (Western)	10813834	80	79.01	49	9.42	202	22900	64
San Marino	Europe (Western)	32742	215	83.18	5	8.7	215	0	229
Spain	Europe (Western)	47737941	29	81.47	18	9.88	197	30100	47
Svalbard	Europe (Western)	1872	234	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sweden	Europe (Western)	9723809	91	81.89	12	11.92	167	40900	26
Switzerland	Europe (Western)	8061516	96	82.39	8	10.48	185	46000	15
United Kingdom	Europe (Western)	63742977	23	80.42	29	12.22	160	37300	34
Armenia	Middle East	3060631	137	74.12	116	13.92	143	6300	147
Azerbaijan	Middle East	9686210	92	71.91	141	16.96	111	10800	114
Bahrain	Middle East	1314089	157	78.58	51	13.92	142	29800	49

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Gaza Strip	Middle East	1816379	152	74.64	109	32.2	35	#N/A	#N/A
Georgia	Middle East	4935880	122	75.72	90	12.93	155	6100	151
Iran	Middle East	80840713	19	70.89	148	18.23	105	12800	103
Iraq	Middle East	32585692	40	71.42	146	26.85	46	7100	141
Israel	Middle East	7821850	99	81.28	19	18.44	101	34900	40
Jordan	Middle East	7930491	98	74.1	117	25.23	53	6100	150
Kuwait	Middle East	2742711	141	77.64	64	20.26	84	42100	23
Lebanon	Middle East	5882562	110	77.22	69	14.8	133	15800	87
Oman	Middle East	3219775	136	74.97	103	24.47	59	29800	50
Qatar	Middle East	2123160	146	78.38	53	9.95	194	102100	1
Saudi Arabia	Middle East	27345986	47	74.82	107	18.78	96	31300	44
Syria	Middle East	17951639	61	68.41	161	22.76	74	5100	159
Turkey	Middle East	81619392	17	73.29	124	16.86	114	15300	90
United Arab Emirates	Middle East	5628805	113	77.09	70	15.54	129	29900	48
West Bank	Middle East	2731052	142	75.69	91	23.41	67	2900	179
Yemen	Middle East	26052966	48	64.83	175	31.02	39	2500	186
Bermuda	North America	69839	204	81.04	23	11.35	173	86000	3
Canada	North America	34834841	38	81.67	14	10.29	188	43100	18
Greenland	North America	57728	206	71.82	142	14.53	137	38400	30
Mexico	North America	120286655	12	75.43	94	19.02	91	15600	88
Saint Pierre and Miquelon	North America	5716	230	80.26	31	7.7	223	34900	39
United States	North America	318892103	4	79.56	42	13.42	150	52800	13
Argentina	South America	43024374	33	77.51	66	16.88	113	18600	75
Bolivia	South America	10631486	82	68.55	159	23.28	70	5500	156

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Brazil	South America	202656788	6	73.28	126	14.72	134	12100	105
Chile	South America	17363894	65	78.44	52	13.97	140	19100	74
Colombia	South America	46245297	30	75.25	97	16.73	117	11100	112
Ecuador	South America	15654411	68	76.36	81	18.87	95	10600	115
Falkland Islands (Islas Malvinas)	South America	3140	232	#N/A	#N/A	#N/A	#N/A	55400	9
Guyana	South America	735554	165	67.81	162	15.9	125	8500	129
Paraguay	South America	6703860	105	76.8	72	16.66	118	6800	143
Peru	South America	30147935	43	73.23	127	18.57	99	11100	110
Suriname	South America	573311	171	71.69	144	16.73	116	12900	101
Uruguay	South America	3332972	135	76.81	71	13.18	152	16600	80
Venezuela	South America	28868486	46	74.39	111	19.42	90	13600	97
Afghanistan	South Asia	31822848	41	50.49	220	38.84	10	1100	216
Bangladesh	South Asia	166280712	9	70.65	149	21.61	76	2100	194
Bhutan	South Asia	733643	166	68.98	157	18.12	106	7000	142
India	South Asia	1236344631	2	67.8	163	19.89	86	4000	168
Maldives	South Asia	393595	177	75.15	99	15.59	127	9100	124
Nepal	South Asia	30986975	42	67.19	165	21.07	79	1500	205
Pakistan	South Asia	196174380	7	67.05	167	23.19	71	3100	176
Sri Lanka	South Asia	21866445	57	76.35	83	16.24	122	6500	145
		7174654290							

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Level 3 Certificate

Quantitative Problem Solving (MEI) H869/02

Statistical Problem Solving Sample Pre-release Material

For issue on or after: Date/Year

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1. This leaflet contains pre-release material which is needed in preparation for the examination of H869/02 (Statistical Problem Solving).

2. You will need to read the material carefully. The examination paper will contain questions related to this material. You will be expected to apply your knowledge and understanding of the work covered in H869/02 (Statistical Problem Solving) to answer the questions.

3. You can seek advice from your teacher about the content of the material and you can discuss it with others in your class. You may also investigate the topic yourself using any resources available to you.

4. You will not be able to bring your copy of the material, or other materials, into the examination. The examination paper will contain a fresh copy of the material as an insert.

5. You will not have time to read this material for the first time in the examination if you are to complete the examination paper within the specified time. However, you should refer to the material when answering the questions.

This document consists of 12 pages.

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Algeria	Africa (Saharan)	38813722	34	76.39	80	23.99	63	7500	137
Egypt	Africa (Saharan)	86895099	16	73.45	122	23.35	68	6600	144
Libya	Africa (Saharan)	6244174	108	76.04	86	18.4	104	11300	109
Morocco	Africa (Saharan)	32987206	39	76.51	78	18.47	100	5500	155
Tunisia	Africa (Saharan)	10937521	79	75.68	92	16.9	112	9900	119
Angola	Africa (Sub-Saharan)	19088106	59	55.29	205	38.97	9	6300	148
Benin	Africa (Sub-Saharan)	10160556	88	61.07	191	36.51	20	1600	202
Botswana	Africa (Sub-Saharan)	2155784	145	54.06	210	21.34	77	16400	82
Burkina Faso	Africa (Sub-Saharan)	18365123	60	54.78	207	42.42	5	1500	203
Burundi	Africa (Sub-Saharan)	10395931	86	59.55	196	42.33	6	600	225
Cabo Verde	Africa (Sub-Saharan)	538535	173	71.57	145	20.72	82	4400	167
Cameroon	Africa (Sub-Saharan)	23130708	54	57.35	202	36.58	19	2400	188
Central African Republic	Africa (Sub-Saharan)	5277959	118	51.35	218	35.45	23	700	224
Chad	Africa (Sub-Saharan)	11412107	77	49.44	223	37.29	16	2500	184
Comoros	Africa (Sub-Saharan)	766865	164	63.48	184	29.05	44	1300	209
Congo, Democratic Republic of the	Africa (Sub-Saharan)	77433744	20	56.54	203	35.62	22	400	228
Congo, Republic of the	Africa (Sub-Saharan)	4662446	125	58.52	198	36.59	18	4800	162
Cote d'Ivoire	Africa (Sub-Saharan)	22848945	55	58.01	200	29.25	43	1800	196
Djibouti	Africa (Sub-Saharan)	810179	163	62.4	187	24.08	62	2700	181
Equatorial Guinea	Africa (Sub-Saharan)	722254	167	63.49	183	33.83	32	25700	58
Eritrea	Africa (Sub-Saharan)	6380803	107	63.51	181	30.69	41	1200	212
Ethiopia	Africa (Sub-Saharan)	96633458	14	60.75	193	37.66	14	1300	211
Gabon	Africa (Sub-Saharan)	1672597	154	52.06	214	34.64	27	19200	72
Gambia, The	Africa (Sub-Saharan)	1925527	150	64.36	176	31.75	37	2000	195

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Ghana	Africa (Sub-Saharan)	25758108	49	65.75	172	31.40	38	3500	174
Guinea	Africa (Sub-Saharan)	11474383	76	59.6	195	36.02	21	1100	215
Guinea-Bissau	Africa (Sub-Saharan)	1693398	153	49.87	221	33.83	31	1200	213
Kenya	Africa (Sub-Saharan)	45010056	31	63.52	180	28.27	45	1800	198
Lesotho	Africa (Sub-Saharan)	1942008	149	52.65	211	25.92	49	2200	192
Liberia	Africa (Sub-Saharan)	4092310	128	58.21	199	35.07	26	700	223
Madagascar	Africa (Sub-Saharan)	23201926	53	65.2	174	33.12	33	1000	219
Malawi	Africa (Sub-Saharan)	17377468	64	59.99	194	41.8	7	900	221
Mali	Africa (Sub-Saharan)	16455903	67	54.95	206	45.53	2	1100	217
Mauritania	Africa (Sub-Saharan)	3516806	133	62.28	188	31.83	36	2200	191
Mauritius	Africa (Sub-Saharan)	1331155	156	75.17	98	13.46	149	16100	86
Mozambique	Africa (Sub-Saharan)	24692144	51	52.6	213	38.83	11	1200	214
Namibia	Africa (Sub-Saharan)	2198406	143	51.85	215	20.28	83	8200	132
Niger	Africa (Sub-Saharan)	17466172	63	54.74	208	46.12	1	800	222
Nigeria	Africa (Sub-Saharan)	177155754	8	52.62	212	38.03	12	2800	180
Rwanda	Africa (Sub-Saharan)	12337138	74	59.26	197	34.61	28	1500	204
Saint Helena, Ascension and Tristan da Cunha	Africa (Sub-Saharan)	7776	228	79.21	45	10.03	191	7800	135
Sao Tome and Principe	Africa (Sub-Saharan)	190428	186	64.22	177	35.12	24	2200	190
Senegal	Africa (Sub-Saharan)	13635927	73	60.95	192	35.09	25	2100	193
Seychelles	Africa (Sub-Saharan)	91650	198	74.25	113	14.54	136	25900	57
Sierra Leone	Africa (Sub-Saharan)	5743725	112	57.39	201	37.4	15	1400	208
Somalia	Africa (Sub-Saharan)	10428043	85	51.58	217	40.87	8	600	227
South Africa	Africa (Sub-Saharan)	48375645	28	49.56	222	18.94	93	11500	108
South Sudan	Africa (Sub-Saharan)	11562695	75	#N/A	#N/A	37.68	13	1400	207

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Sudan	Africa (Sub-Saharan)	35482233	37	63.32	185	30.01	42	2600	182
Swaziland	Africa (Sub-Saharan)	1419623	155	50.54	219	25.18	54	5700	154
Tanzania	Africa (Sub-Saharan)	49639138	26	61.24	190	36.82	17	1700	200
Togo	Africa (Sub-Saharan)	7351374	100	64.06	178	34.52	29	1100	218
Uganda	Africa (Sub-Saharan)	35918915	36	54.46	209	44.17	3	1500	206
Western Sahara	Africa (Sub-Saharan)	554795	172	62.27	189	30.71	40	2500	187
Zambia	Africa (Sub-Saharan)	14638505	71	51.83	216	42.46	4	1800	199
Zimbabwe	Africa (Sub-Saharan)	13771721	72	55.68	204	32.47	34	600	226
Australia	Australasia	22507617	56	82.07	10	12.19	162	43000	19
New Zealand	Australasia	4401916	127	80.93	26	13.4	151	30400	46
Papua New Guinea	Australasia	6552730	106	66.85	168	24.89	57	2900	178
Christmas Island	Oceania	1530	235	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Cocos (Keeling) Islands	Oceania	596	239	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Cook Islands	Oceania	10134	226	75.38	95	14.7	135	9100	123
Fiji	Oceania	903207	162	72.15	139	19.86	87	4900	161
French Polynesia	Oceania	280026	182	76.79	73	15.47	131	22000	67
Guam	Oceania	161001	188	78.82	50	17.01	110	28700	53
Kiribati	Oceania	104488	194	65.47	173	21.85	75	6400	146
Marshall Islands	Oceania	70983	203	72.58	133	26.36	47	8700	127
Micronesia, Federated States of	Oceania	105681	193	72.35	135	20.97	80	7300	140
Nauru	Oceania	9488	227	66.4	169	25.61	51	5000	160
New Caledonia	Oceania	267840	183	77.31	68	15.57	128	37700	33
Niue	Oceania	1190	237	#N/A	#N/A	#N/A	#N/A	5800	153
Norfolk Island	Oceania	2210	233	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Northern Mariana Islands	Oceania	51483	210	77.64	63	18.94	94	13600	98
Palau	Oceania	21186	220	72.6	132	10.95	177	10500	116
Pitcairn Islands	Oceania	48	240	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Samoa	Oceania	196628	185	73.21	128	21.29	78	6200	149
Solomon Islands	Oceania	609883	169	74.89	105	26.33	48	3400	175
Tokelau	Oceania	1337	236	#N/A	#N/A	#N/A	#N/A	1000	220
Tonga	Oceania	106440	192	75.82	88	23.55	66	8200	133
Tuvalu	Oceania	10782	225	65.81	171	23.74	64	3500	173
Vanuatu	Oceania	266937	184	72.72	131	25.69	50	4800	164
Wallis and Futuna	Oceania	15561	224	79.42	44	13.56	148	3800	172
American Samoa	Oceania	54517	208	74.91	104	22.87	72	8000	134
Anguilla	Caribbean	16086	221	81.2	21	12.68	157	12200	104
Antigua and Barbuda	Caribbean	91295	199	76.12	85	15.94	124	18400	76
Aruba	Caribbean	110663	190	76.35	82	12.65	158	25300	59
Bahamas, The	Caribbean	321834	179	71.93	140	15.65	126	32000	43
Barbados	Caribbean	289680	181	74.99	102	11.97	166	25100	60
British Virgin Islands	Caribbean	32680	216	78.29	57	10.83	180	42300	22
Cayman Islands	Caribbean	54914	207	81.02	24	12.13	164	43800	17
Cuba	Caribbean	11047251	78	78.22	59	9.9	195	10200	117
Curacao	Caribbean	146836	189	#N/A	#N/A	#N/A	#N/A	15000	91
Dominica	Caribbean	73449	202	76.59	77	15.53	130	14300	94
Dominican Republic	Caribbean	10349741	87	77.8	62	18.97	92	9700	121
Grenada	Caribbean	110152	191	73.8	120	16.3	120	13800	96
Haiti	Caribbean	9996731	89	63.18	186	22.83	73	1300	210
Jamaica	Caribbean	2930050	140	73.48	121	18.41	102	9000	125

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Montserrat	Caribbean	5215	231	73.9	119	11.31	174	8500	128
Puerto Rico	Caribbean	3620897	130	79.09	47	10.9	178	16300	84
Saint Barthelemy	Caribbean	7267	229	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Saint Kitts and Nevis	Caribbean	51538	209	75.29	96	13.64	146	16300	83
Saint Lucia	Caribbean	163362	187	77.41	67	13.94	141	13100	100
Saint Martin	Caribbean	31530	217	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Saint Vincent and the Grenadines	Caribbean	102918	196	74.86	106	13.85	144	12100	106
Sint Maarten	Caribbean	39689	213	77.61	65	13	154	15400	89
Trinidad and Tobago	Caribbean	1223916	159	72.29	136	13.8	145	20300	70
Turks and Caicos Islands	Caribbean	49070	212	79.55	43	16.61	119	29100	52
Virgin Islands	Caribbean	104170	195	79.75	40	10.49	184	14500	92
Belize	Central America	340844	178	68.49	160	25.14	55	8800	126
Costa Rica	Central America	4755234	124	78.23	58	16.08	123	12900	102
El Salvador	Central America	6125512	109	74.18	114	16.79	115	7500	138
Guatemala	Central America	14647083	70	71.74	143	25.46	52	5300	157
Honduras	Central America	8598561	94	70.91	147	23.66	65	4800	163
Nicaragua	Central America	5848641	111	72.72	130	18.41	103	4500	166
Panama	Central America	3608431	131	78.3	56	18.61	98	16500	81
Kazakhstan	Central Asia	17948816	62	70.24	150	19.61	88	14100	95
Kyrgyzstan	Central Asia	5604212	114	70.06	153	23.33	69	2500	185
Russia	Central Asia	142470272	10	70.16	151	11.87	168	18100	77
Tajikistan	Central Asia	8051512	97	67.06	166	24.99	56	2300	189
Turkmenistan	Central Asia	5171943	120	69.47	155	19.46	89	9700	122
Uzbekistan	Central Asia	28929716	45	73.29	125	17.02	109	3800	170

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Brunei	East & South East Asia	422675	175	76.77	74	17.49	107	54800	11
Burma	East & South East Asia	55746253	25	65.94	170	18.65	97	1700	201
Cambodia	East & South East Asia	15458332	69	63.78	179	24.4	60	2600	183
China	East & South East Asia	1355692576	1	75.15	100	12.17	163	9800	120
Hong Kong	East & South East Asia	7112688	102	82.78	6	9.38	204	52700	14
Indonesia	East & South East Asia	253609643	5	72.17	137	17.04	108	5200	158
Japan	East & South East Asia	127103388	11	84.46	3	8.07	222	37100	36
Korea, North	East & South East Asia	24851627	50	69.81	154	14.51	138	1800	197
Korea, South	East & South East Asia	49039986	27	79.8	39	8.26	220	33200	42
Laos	East & South East Asia	6803699	104	63.51	182	24.76	58	3100	177
Macau	East & South East Asia	587914	170	84.48	2	8.98	209	82400	4
Malaysia	East & South East Asia	30073353	44	74.52	110	20.06	85	17500	79
Mongolia	East & South East Asia	2953190	139	68.98	158	20.88	81	5900	152
Philippines	East & South East Asia	107668231	13	72.48	134	24.24	61	4700	165
Singapore	East & South East Asia	5567301	116	84.38	4	8.1	221	62400	7
Taiwan	East & South East Asia	23359928	52	79.84	38	8.55	216	39600	28
Thailand	East & South East Asia	67741401	21	74.18	115	11.26	175	9900	118
Timor-Leste	East & South East Asia	1201542	160	67.39	164	34.48	30	21400	68
Vietnam	East & South East Asia	93421835	15	72.91	129	16.26	121	4000	169
Albania	Europe (Eastern)	3020209	138	77.96	60	12.73	156	8200	131
Belarus	Europe (Eastern)	9608058	93	72.15	138	10.86	179	16100	85
Bosnia and Herzegovina	Europe (Eastern)	3871643	129	76.33	84	8.89	211	8300	130
Bulgaria	Europe (Eastern)	6924716	103	74.33	112	8.92	210	14400	93
Croatia	Europe (Eastern)	4470534	126	76.41	79	9.49	201	17800	78
Czech Republic	Europe (Eastern)	10627448	83	78.31	55	9.79	199	26300	56

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Estonia	Europe (Eastern)	1257921	158	74.07	118	10.29	187	22400	66
Hungary	Europe (Eastern)	9919128	90	75.46	93	9.26	207	19800	71
Kosovo	Europe (Eastern)	1859203	151	#N/A	#N/A	#N/A	#N/A	7600	136
Moldova	Europe (Eastern)	3583288	132	70.12	152	12.21	161	3800	171
Montenegro	Europe (Eastern)	650036	168	#N/A	#N/A	10.59	182	11900	107
Poland	Europe (Eastern)	38346279	35	76.65	76	9.77	200	21100	69
Romania	Europe (Eastern)	21729871	58	74.69	108	9.27	206	13200	99
Serbia	Europe (Eastern)	7209764	101	75.02	101	9.13	208	11100	111
Slovakia	Europe (Eastern)	5443583	117	76.69	75	10.01	192	24700	61
Slovenia	Europe (Eastern)	1988292	148	77.83	61	8.54	217	27400	55
Ukraine	Europe (Eastern)	44291413	32	69.14	156	9.41	203	7400	139
Akrotiri	Europe (Western)	15700	223	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Andorra	Europe (Western)	85458	201	82.65	7	8.48	218	37200	35
Austria	Europe (Western)	8223062	95	80.17	32	8.76	214	42600	21
Belgium	Europe (Western)	10449361	84	79.92	36	9.99	193	37800	32
Cyprus	Europe (Western)	1172458	161	78.34	54	11.44	172	24500	62
Denmark	Europe (Western)	5569077	115	79.09	48	10.22	190	37800	31
Dhekelia	Europe (Western)	15700	222	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Faroe Islands	Europe (Western)	49947	211	80.11	34	13.57	147	30500	45
Finland	Europe (Western)	5268799	119	79.69	41	10.35	186	35900	37
France	Europe (Western)	66259012	22	81.66	15	12.49	159	35700	38
Germany	Europe (Western)	80996685	18	80.44	28	8.42	219	39500	29
Gibraltar	Europe (Western)	29185	219	79.13	46	14.15	139	43000	20
Greece	Europe (Western)	10775557	81	80.3	30	8.8	213	23600	63
Guernsey	Europe (Western)	65849	205	82.39	9	9.89	196	44600	16

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Holy See (Vatican City)	Europe (Western)	842	238	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Iceland	Europe (Western)	317351	180	81.22	20	13.09	153	40700	27
Ireland	Europe (Western)	4832765	123	80.56	27	15.18	132	41300	25
Isle of Man	Europe (Western)	86866	200	80.98	25	11.17	176	53800	12
Italy	Europe (Western)	61680122	24	82.03	11	8.84	212	29600	51
Jersey	Europe (Western)	96513	197	81.66	16	11.65	170	57000	8
Latvia	Europe (Western)	2165165	144	73.44	123	9.79	198	19100	73
Liechtenstein	Europe (Western)	37313	214	81.68	13	10.53	183	89400	2
Lithuania	Europe (Western)	3505738	134	75.98	87	9.36	205	22600	65
Luxembourg	Europe (Western)	520672	174	80.01	35	11.75	169	77900	5
Macedonia	Europe (Western)	2091719	147	75.8	89	11.64	171	10800	113
Malta	Europe (Western)	412655	176	80.11	33	10.24	189	27500	54
Monaco	Europe (Western)	30508	218	89.57	1	6.72	224	65500	6
Netherlands	Europe (Western)	16877351	66	81.12	22	10.83	181	41400	24
Norway	Europe (Western)	5147792	121	81.6	17	12.09	165	55400	10
Portugal	Europe (Western)	10813834	80	79.01	49	9.42	202	22900	64
San Marino	Europe (Western)	32742	215	83.18	5	8.7	215	0	229
Spain	Europe (Western)	47737941	29	81.47	18	9.88	197	30100	47
Svalbard	Europe (Western)	1872	234	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sweden	Europe (Western)	9723809	91	81.89	12	11.92	167	40900	26
Switzerland	Europe (Western)	8061516	96	82.39	8	10.48	185	46000	15
United Kingdom	Europe (Western)	63742977	23	80.42	29	12.22	160	37300	34
Armenia	Middle East	3060631	137	74.12	116	13.92	143	6300	147
Azerbaijan	Middle East	9686210	92	71.91	141	16.96	111	10800	114
Bahrain	Middle East	1314089	157	78.58	51	13.92	142	29800	49

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Gaza Strip	Middle East	1816379	152	74.64	109	32.2	35	#N/A	#N/A
Georgia	Middle East	4935880	122	75.72	90	12.93	155	6100	151
Iran	Middle East	80840713	19	70.89	148	18.23	105	12800	103
Iraq	Middle East	32585692	40	71.42	146	26.85	46	7100	141
Israel	Middle East	7821850	99	81.28	19	18.44	101	34900	40
Jordan	Middle East	7930491	98	74.1	117	25.23	53	6100	150
Kuwait	Middle East	2742711	141	77.64	64	20.26	84	42100	23
Lebanon	Middle East	5882562	110	77.22	69	14.8	133	15800	87
Oman	Middle East	3219775	136	74.97	103	24.47	59	29800	50
Qatar	Middle East	2123160	146	78.38	53	9.95	194	102100	1
Saudi Arabia	Middle East	27345986	47	74.82	107	18.78	96	31300	44
Syria	Middle East	17951639	61	68.41	161	22.76	74	5100	159
Turkey	Middle East	81619392	17	73.29	124	16.86	114	15300	90
United Arab Emirates	Middle East	5628805	113	77.09	70	15.54	129	29900	48
West Bank	Middle East	2731052	142	75.69	91	23.41	67	2900	179
Yemen	Middle East	26052966	48	64.83	175	31.02	39	2500	186
Bermuda	North America	69839	204	81.04	23	11.35	173	86000	3
Canada	North America	34834841	38	81.67	14	10.29	188	43100	18
Greenland	North America	57728	206	71.82	142	14.53	137	38400	30
Mexico	North America	120286655	12	75.43	94	19.02	91	15600	88
Saint Pierre and Miquelon	North America	5716	230	80.26	31	7.7	223	34900	39
United States	North America	318892103	4	79.56	42	13.42	150	52800	13
Argentina	South America	43024374	33	77.51	66	16.88	113	18600	75
Bolivia	South America	10631486	82	68.55	159	23.28	70	5500	156

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Country	Sub region	Population	Population capita ranking	Life expectancy	Life expectancy at birth ranking	Birth rate per 1000	Birth rate ranking	GDP per capita (US$)	GDP per capita ranking
Brazil	South America	202656788	6	73.28	126	14.72	134	12100	105
Chile	South America	17363894	65	78.44	52	13.97	140	19100	74
Colombia	South America	46245297	30	75.25	97	16.73	117	11100	112
Ecuador	South America	15654411	68	76.36	81	18.87	95	10600	115
Falkland Islands (Islas Malvinas)	South America	3140	232	#N/A	#N/A	#N/A	#N/A	55400	9
Guyana	South America	735554	165	67.81	162	15.9	125	8500	129
Paraguay	South America	6703860	105	76.8	72	16.66	118	6800	143
Peru	South America	30147935	43	73.23	127	18.57	99	11100	110
Suriname	South America	573311	171	71.69	144	16.73	116	12900	101
Uruguay	South America	3332972	135	76.81	71	13.18	152	16600	80
Venezuela	South America	28868486	46	74.39	111	19.42	90	13600	97
Afghanistan	South Asia	31822848	41	50.49	220	38.84	10	1100	216
Bangladesh	South Asia	166280712	9	70.65	149	21.61	76	2100	194
Bhutan	South Asia	733643	166	68.98	157	18.12	106	7000	142
India	South Asia	1236344631	2	67.8	163	19.89	86	4000	168
Maldives	South Asia	393595	177	75.15	99	15.59	127	9100	124
Nepal	South Asia	30986975	42	67.19	165	21.07	79	1500	205
Pakistan	South Asia	196174380	7	67.05	167	23.19	71	3100	176
Sri Lanka	South Asia	21866445	57	76.35	83	16.24	122	6500	145
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Summary of updates

Date	Version	Change
September 2025	3.0	Accessibility changes: Arial font Left alignment of text, tables and graphs Emboldening titles and key words Language modification of questions Scaffolding of questions into parts to ensure only a single demand being requested per question and to improve the awarding of follow through marks Replacement of answer boxes with answer lines Insertion of answer spaces after each question part, rather than grouped Detail of RM assessor added to mark scheme Mark scheme rubric updated